NATIONAL CEMENT
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Ms. Liane M Randoph
Chair
California Air Resources Board (CARB)
1001 “I” Street
Post Office Box 2815
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March 28, 2025

Dear Ms. Randolph:

National Cement of California (NCC) appreciates the opportunity to provide comment on CARB’s February 27 workshop on carbon capture, utilization, and storage (CCUS) and the implementation of SB 905.

As background, NCC operates a cement plant in Lebec, California, in southern Kern County. NCC has been producing cement at this location for over 60 years. Cement produced at Lebec is shipped to concrete customers throughout California – from Merced County to the north to LA and Orange Counties to the south. Our customer base includes our own concrete division and third-party concrete producers which use that cement to support housing development, new infrastructure, and commercial development of all kinds.

As CARB continues examining CCUS in California, we would like to emphasize the following:

1. CCUS is critical for the cement industry to reach net-zero carbon emissions.

Cement is widely acknowledged as a hard-to-decarbonize sector because there are multiple sources of carbon emissions in cement production – fuel emissions and process emissions. Fuel emissions relate to the industry’s historical reliance on fossil fuels as energy for heating the cement kiln during the manufacturing process, which yields carbon dioxide as a byproduct of fuel combustion. Process emissions relate to the chemical reaction associated with heating limestone, the raw material for cement, which releases carbon dioxide stored in the limestone as a byproduct. This process transforms limestone into clinker, which is the carbon-intensive material in cement.

In the near-term, there are pathways to reduce carbon emissions with both fuel emissions and process emissions. To reduce fuel emissions, cement producers can utilize alternative fuels with biogenic content which enables the displacement of fossil fuels. To further reduce both fuel and process emissions, cement producers can create blended cements which substitute clinker with alternative raw materials to reduce the clinker content in cement. NCC is proud to be leading on both of these decarbonization levers in California.

However, because the majority of emissions from cement production are associated with process emissions, CCUS becomes a necessary pathway to achieve carbon neutrality in the cement sector. This is explicitly acknowledged in SB 596, California's adopted pathway for net-zero cement, along with the net-zero roadmaps established by the California Nevada Cement Association and the nationally-based Portland Cement Association.

In addition, there are important air quality benefits beyond reductions in carbon emissions from carbon capture technology installed at cement plants. The Clean Air Task Force, in a December 2023 report, noted that carbon capture at cement facilities will reduce sulfur dioxide (SO_2) by 99% and particulate emissions by 93-97%. These are substantial improvements to air quality that would not otherwise occur.

2. **NCC has an industry-first project, Lebec Net-Zero, in partnership with the U.S. Department of Energy (DOE). Lebec Net-Zero uses a three-pronged approach to become net-zero, including via carbon capture and sequestration. This project is a major catalyst for the cement sector as well as the carbon management sector in California.**

In December 2024, NCC was awarded $500 million from the U.S. Department of Energy, Office of Clean Energy Demonstrations, to support development of the Lebec-Net Zero project. This project is one of 33 projects across a range of industrial sectors to demonstrate how to achieve net-zero emissions. This funding will serve as matching funding for NCC to provide the remaining investment, for a total project cost of over $1 billion.

DOE requires completion of Lebec-Net Zero by 2031. This means that NCC's cement plant will be one of the first fully decarbonized cement plants in the U.S. and globally.

We believe we were awarded this project because our track record within the industry for reducing carbon emissions through fuel substitution (via alternative fuels) and clinker substitution (via blended cements such as Portland Limestone Cement, also known as Type 1L cement) – and backed by our ownership's demonstrated commitment to climate action.

Lebec Net-Zero utilizes the approach described further above to reduce both fuel and process emissions, and then capturing the remaining emissions. To reduce fuel emissions, NCC will be ramping up consumption of biomass agricultural waste which will reduce landfilling and enhance the circular economy in Kern County. To reduce process emissions, NCC will scale up production of limestone-calcined clay (LC3) cement which reduces the clinker content of cement by at least 20-30%.

The remaining carbon emissions not otherwise reduced through these levers will rely on carbon capture and sequestration (CCS). The scale of emissions at our plant requires that sequestration be the primary method to manage carbon. Importantly, the CCS component of Lebec Net-Zero represents a significant share of the total overall project cost.

3. **For Lebec Net-Zero to be completed by 2031, in accordance with DOE requirements, California must implement a few key policies by 2027. Without these policies in place, NCC cannot commit the remaining investment required to develop this project. NCC and DOE want this demonstration project to be successful in order to accelerate the industry's path forward in California.**

   A. **Firstly, California must re-authorize Cap-and-Trade beyond the current 2030 expiration date, and extend it to 2045.**

      Re-authorizing Cap-and-Trade is necessary to provide regulated entities certainty, via stable and foreseeable carbon pricing, to make business decisions that require substantial investments. NCC recognizes that reauthorization of Cap-and-Trade rests with the State Legislature and Governor.

   B. **California must implement a border carbon adjustment (BCA) mechanism, or similar measure, to level the playing field between in-state producers and cement importers.**

      Presently, Cap-and-Trade regulations apply to cement produced in California, but not cement imported into California. California cement producers are uniquely vulnerable to the risk of emissions and economic leakage to imports of higher carbon cement. California needs to level the playing field to protect California-based producers and have the same rules apply to importers as producers.

      As cleaner construction materials become more prevalent, as required by state laws and regulations, a border carbon adjustment mechanism, or similar measure, is necessary to remedy the disadvantage faced by in-state cement producers and to protect the investments in-state producers must make into technologies such as CCUS.

      NCC recognizes CARB has authority to implement a BCA and that CARB is in active discussions with the California cement industry to achieve this.

   C. **CARB must incorporate CCUS into Cap-and-Trade so that captured carbon does not count as emitted carbon.**

      NCC recognizes CARB's existing regulations express clear intent that captured carbon dioxide that is sequestered will be subtracted from a carbon dioxide supplier's emissions data to determine its aggregate compliance obligation. Presently, however, this regulation is unable be fully implemented without the associated quantification methodology for safe and permanently sequestered carbon dioxide. NCC urges CARB to complete this step.

4. **NCC encourages CARB to guide policies and regulations in a manner that does not further restrict building the end-to-end CCUS infrastructure needed to fully decarbonize the cement sector.**

We caution against adding additional permitting requirements for developing CCUS projects in California. Additional permit requirements will add delay and cost which will significantly impede the development of the end-to-end CCUS infrastructure needed to decarbonize heavy industry.

We recognize the unified permit application via SB 905 may benefit project developers with a clarified and streamlined process, for developers who may wish to utilize that option. Presently, however, CCUS projects are still able to move forward by meeting all EPA Class VI permit requirements, PHMSA and state pipeline standards, and local conditional use permits that are subject to extensive public input.

We appreciate your consideration of these items as CARB's work moves forward.

Sincerely,

Jon Dearing
Vice President
National Cement of California